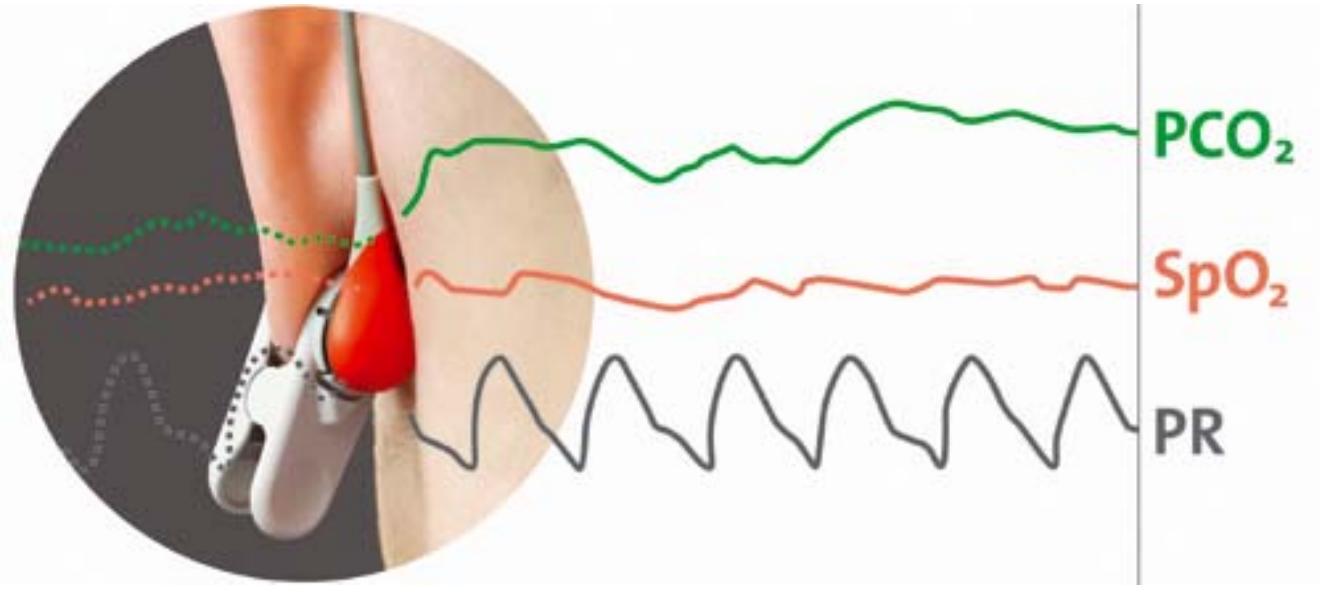
sentec

A new dimension
in non-invasive patient monitoring



Imagine the possibilities!

PRODUCTS 2010

Valid from August 16, 2010

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SenTec Digital Monitoring System (SDMS)

Product: **SenTec Digital Monitoring System**
Product codes: **'SDMS', 'SDMS-N', 'SDMS_nG', or 'SDMS-N_nG'**

Patient Monitoring System

Patient Monitoring System comprising 1 SenTec Digital Monitor (SDM) with current firmware version, 1 V-Sign™ Sensor (model VS-A/P or VS-A/P/N), 1 Digital Sensor Adaptor Cable (AC-150), 1 V-STATS™ Installation CD (V-STATS™ _CD), 1 Starter Set (see table below), and 1 V-Sign™ Training Set (VS-TSET). 1 User Manual CD (UMCD), 1 Quick Reference Guide (QRG-xx), 1 Instruction Manual (IM-xx), and 1 main power cord are also included. For details on contained items see corresponding product codes.

Depending on the Product Code used one of the four available 'Starter Sets' will be shipped:

Product Code used	Starter Set to be shipped	Comment
SDMS	VS-SSET	Standard Starter Set (with 1 bottle Service Gas)
SDMS-N	VS-SSET-N	Neonatal Starter Set (with 1 bottle Service Gas)
SDMS_nG	VS-SSET_nG	Standard Starter Set (without Service Gas)
SDMS-N_nG	VS-SSET-N_nG	Neonatal Starter Set (without Service Gas)

Note: 'SDMS' and 'SDMS-N' each contain 1 bottle 'Service Gas' (a pressurized container) and therefore are considered as dangerous goods when shipped. Costs related to handling of dangerous goods during shipment (in particular for air freight) may arise.

Note: Gas bottles are pressurized containers. SDMS', 'SDMS-N', and 'GAS-0812' therefore are considered as dangerous goods. 'GAS-0812' contains 6 gas bottles whereas 'SDMS' or 'SDMS-N' contain only 1 gas bottle. The costs per gas bottle that are related to handling of dangerous goods during shipment (in particular for air freight) therefore are higher when ordering 1 'SDMS' or 1 'SDMS-N' as compared to ordering 1 'SDMS_nG' and 1 'GAS-0812' or 1 'SDMS-N_nG' and 1 'GAS-0812', respectively.

Starter Set

Ear Clip (EC-MI)
for mature, intact skin

Multi-Site Attachment Ring (MAR-MI)
for mature, intact skin

Multi-Site Attachment Ring (MAR-SF)
for sensitive, fragile skin

Contact Gel

V-Sign™ Membrane Changer (VS-MC)

Service Gas

Product: **Starter Set**
Product codes: **'VS-SSET', 'VS-SSET-N', 'VS-SSET_nG', or 'VS-SSET-N_nG'**

Set of disposables, covering approximately one month's need.

Four different 'Starter Set' configurations are available:

	Standard Starter Set		Neonatal Starter Set	
Product Code	VS-SSET	VS-SSET_nG	VS-SSET-N	VS-SSET-N_nG
Ear Clips (EC-MI)	12	12	--	--
Multi-Site Attachment Rings (MAR-MI)	12	12	8	8
Multi-Site Attachment Rings (MAR-SF)	4	4	16	16
V-Sign™ Membrane Changer (VS-MC)	2	2	2	2
Contact Gel (GEL-04)	1	1	1	1
Service Gas (GAS-0812)	1	--	1	--

Note: 'VS-SSET' and 'VS-SSET-N' each contain 1 bottle 'Service Gas' (a pressurized container) and therefore are considered as dangerous goods. Costs related to handling of dangerous goods during shipment (in particular for air freight) may arise.

Note: Gas bottles are pressurized containers. 'VS-SSET', 'VS-SSET-N', and 'GAS-0812' therefore are considered as dangerous goods. 'GAS-0812' contains 6 gas bottles whereas 'VS-SSET' or 'VS-SSET-N' contain only 1 gas bottle. The costs per gas bottle that are related to handling of dangerous goods during shipment (in particular for air freight) therefore are higher when ordering 1 'VS-SSET' or 1 'VS-SSET-N' as compared to ordering 1 'VS-SSET_nG' and 1 'GAS-0812' or 1 'VS-SSET-N_nG' and 1 'GAS-0812', respectively.

SDMS Carry Bag

Product: **SDMS Carry Bag**
Product code: **SDMS_CB**

Carry Bag for the SenTec Digital Monitoring System (SDMS)

Designed specifically for the SDMS this stylish yet sturdy and durable carry bag is perfect for transporting your SDMS. The bag easily accommodates the SenTec Digital Monitor (SDM), sensors, cables (sensor adapter cables / power cable) as well as frequently used disposables. Documents (Quick Reference Guide, Instruction Manual) can be stowed in a specifically designed compartment. Its zipper top can be opened for monitoring during patient transport whereas its Velcro®[1] bottom can be opened to access the monitor's rear panel with the ON/OFF switch, the AC Power Connector, the sensor connection port and the different data communication ports.

Specifications:

General
- Size: 340 X 285 X 150 mm
- Color: grey
- Material: hard-wearing Nylon (padded)
- Sturdy, adjustable shoulder strap (removable)

Main Compartment
- Accommodates monitor, sensor, extension Cable and gas bottle
- Two gauze covered ventilation slots
- Zipper top / Velcro bottom which can be quickly pulled open

Side Compartment
- Meshes subdivide the side compartment in 4 parts to accommodate power cable and frequently used disposables.
- Documents can be stowed in a specifically designed compartment
- Zipper to open/close

[1] Velcro® is a registered trademark owned by Velcro Industries B.V.

SenTec Digital Monitor

Product: **SenTec Digital Monitor**
Product code: **SDM**

Stand-alone Patient Monitor with integrated calibration chamber.

Stand-alone Monitor for display of data measured with SenTec Sensors. Includes mains power cord. Shipped with the current firmware version.

V-Sign™ Sensor

Product: **V-Sign™ Sensor**
Product code: **VS-A/P**

Carbon dioxide tension and oxygen saturation sensor.

Digital Sensor for non-invasive and continuous measurement of transcutaneous carbon dioxide partial pressure (tcPCO2) and pulse oximetry (SpO2, PR). Suitable for adult, pediatric, and neonatal patients. Includes 1 SC-CC. If applied to sites other than the earlobe and in particular for neonatal usage V-Sign™ Sensor is currently indicated for tcPCO2 monitoring only. To be connected to the SDM with a 'Digital Sensor Adapter Cable' (AC-XXX).

NEW

V-Sign™ Sensor 2

Product: **V-Sign™ Sensor 2** (orange cable)
Product code: **VS-A/P/N**

Carbon dioxide tension and oxygen saturation sensor.

Digital Sensor for non-invasive and continuous measurement of transcutaneous carbon dioxide partial pressure (tcPCO2) and pulse oximetry (SpO2, PR). Suitable for adult, pediatric, and neonatal patients. Includes 1 SC-CC. With the V-Sign™ Sensor 2, SpO2 and PR measurements are no longer restricted to the ear lobe and additionally can be measured at the forehead and cheek of adult or pediatric patients. If applied to sites other than the earlobe, forehead or cheek and in particular for neonatal usage, V-Sign™ Sensor 2 is currently indicated for tcPCO2 monitoring only. To be connected to the SDM with a 'Digital Sensor Adapter Cable' (AC-XXX).

Requires SDM firmware version SMB V07.00 / MPB V05.00 or newer.

Digital Sensor Adapter Cable

Product Code	Product: Digital Sensor Adapter Cable
AC-150	Length = 150 cm
AC-250	Length = 250 cm
AC-750	Length = 750 cm
AC-YYY	Customized Length (up to 920 cm)

Adapter Cable required to connect the V-Sign™ Sensor (models VS-A/P and VS-A/P/N) to the SenTec Digital Monitor (SDM).

Ear Clip

for Adults, Pediatrics, Neonates (with mature, intact skin)

24 x

Product: **Ear Clip [24 pcs]**
Product code: **EC-MI**

Single-patient use ear clips for use with the V-Sign™ Sensor (models VS-A/P and VS-A/P/N)

The Ear Clip is required to attach the V-Sign™ Sensor (models VS-A/P and VS-A/P/N) to the patient's earlobe. Suitable for adult, pediatric and neonatal patients with mature, intact skin and earlobes of sufficient size.

Multi-Site Attachment Ring (MAR-SF)

for Adults, Pediatrics, Neonates (with sensitive, fragile skin)

24 x

Product: **Multi-Site Attachment Ring for Adults, Pediatrics, Neonates [24 pcs]**
Product code: **MAR-SF**

Single-use Attachment Ring for use with the V-Sign™ Sensor (models VS-A/P and VS-A/P/N)

MAR-SF is intended to attach the V-Sign™ Sensor (models VS-A/P and VS-A/P/N) to various measurement sites. For neonates as well as for adults and pediatrics with sensitive (fragile) but intact skin.

Multi-Site Attachment Ring (MAR-MI)

for Adults, Pediatrics, Neonates (with mature, intact skin)

Product: **Multi-Site Attachment Ring for Adults, Pediatrics, Neonates [50 pcs]**
Product code: **MAR-MI**

Single-use Attachment Ring for use with the V-Sign™ Sensor (models VS-A/P and VS-A/P/N)

MAR-MI is intended to attach the V-Sign™ Sensor (models VS-A/P and VS-A/P/N) to various measurement sites. For adults, pediatrics and neonates with mature, intact skin.

Contact Gel

Product: **Contact Gel [5 ml]**
Product code: **GEL-04**

Contact Gel for the application of the V-Sign™ Sensor (models VS-A/P and VS-A/P/N) [5 ml]

The Contact Gel is required for proper CO_2 gas conduction from the patient's skin to the V-Sign™ Sensor . Every time the V-Sign™ Sensor is to be attached to the measurement site, one drop of contact liquid (e.g. Contact Gel) must be applied to the center of the sensor membrane or to the measurement site.

Note: Instead of the Contact Gel you may also use clean tap water, sterile water or sterile saline solution (0.9% sodium chloride) to apply the V-Sign™ Sensor.

Service Gas

Product: **Service Gas [6 bottles]**
Product code: **GAS-0812**

Calibration Gas, cylinder of 0.56 l, 9.5 bar (5.7 l at 1 bar, 21°C)

The Service Gas is required for the calibration of the PCO_2-part of V-Sign™ Sensors (models VS-A/P and VS-A/P/N). Depending on usage of the SDMS one Service Gas cylinder lasts for approx. 3 to 4 weeks.

Note: Pressurized containers are considered as dangerous goods. Costs related to handling of dangerous goods during shipment (in particular for air freight) may arise.

V-Sign™ Membrane Changer

9 x

Product: **V-Sign™ Membrane Changer [9 pcs]**
Product code: **VS-MC**

Reloadable tool to change the membrane of V-Sign™ Sensors (models VS-A/P and VS-A/P/N)

The membrane and the electrolyte of V-Sign™ Sensors (models VS-A/P and VS-A/P/N) must be changed periodically. For this purpose the old sensor membrane must be removed, the sensor surface must be cleaned, new electrolyte must be applied and a new sensor membrane must be put on. The patented V-Sign™ Membrane Changer is a tool that allows the user to carry out the whole membrane change process by 4 simple press-and-turn steps. To enable an economic and cost saving membrane change, the V-Sign™ Membrane Changer after use can be reloaded with a new V-Sign™ Membrane Changer Insert (VS-MCI).

V-Sign™ Membrane Changer Insert

5 x

Product: **V-Sign™ Membrane Changer Insert [5 pcs]**
Product code: **VS-MCI**

Separately bagged, single-use Inserts for the V-Sign™ Membrane Changer

The V-Sign™ Membrane Changer (VS-MC) is a reloadable tool to change the membrane of V-Sign™ Sensors (models VS-A/P and VS-A/P/N). Prior reuse, the V Sign™ Membrane Changer must be reloaded with a new V Sign™ Membrane Changer Insert.

V-Sign™ Membrane Changer SET

Product: **V-Sign™ Membrane Changer SET [1 VS-MC and 1 VS-MCI]**
Product code: **VS-MCSET**

Set of 1 V-Sign™ Membrane Changer and 1 V-Sign™ Membrane Changer Insert

Contains one (loaded) V-Sign™ Membrane Changer (VS-MC) and one V-Sign™ Membrane Changer Insert (VS-MCI) for a total of two membrane changes.

V-Sign™ Training Set

Product: **V-Sign™ Training Set**
Product code: **VS-TSET**

Set to train the membrane change of the V-Sign™ Sensor

The V-Sign™ Training Set is intended to teach the change of the membrane of the V-Sign™ Sensor (models VS-A/P and VS-A/P/N). The set contains a multiple-use Membrane Changer, a Dummy Sensor and 2 multiple-use Membrane Rings. With this set, no V-Sign™ Membrane Changers (VS-MC) have to be spent for training purposes.

Clothing Clip for Sensor Cable

2 x

Product: **Clothing Clip for Sensor Cable [2 pcs]**
Product code: **SC-CC**

Clip for fixation of the cable of SenTec sensors (models VS-A/P, VS-A/P/N, RSS-M) on patient clothes or bed linen

The Clothing Clip secures the sensor cable on the patient's clothes or on the bed's linen. Proper cable organization can help to reduce strain. To prevent dislocation of the sensor, no strain should pull on the sensor when attached to the patient.

SpO2 Soft Sensor

Product: **SpO2 Soft Sensor (SpO2 and PR)**
Product code: **RSS-M**

Reusable finger-tip sensor for non-invasive and continuous measurement of pulse oximetry (SpO2, PR), suitable for patients weighing more than 20 kg. The sheath-like design of the rubber tube, which is resilient to immersion, guarantees very easy handling and cleaning. The SpO2 Soft Sensor initially is available in one size RSS-M (medium). To be connected to the SDM with a 'SpO2 Adapter Cable' (SC-XXX).

Requires SDM firmware version SMB V07.00 / MPB V05.00 or newer. Compatible with (non-OxiMax) Nellcor™ Pulse Oximetry. (Nellcor™ and OxiMax™ are registered trademarks owned by Covidien AG)

SpO2 Adapter Cable

Product Code	Product: SpO2 Adapter Cable
SC-150	Length = 150 cm
SC-250	Length = 250 cm
SC-750	Length = 750 cm
SC-YYY	Customized Length (up to 920 cm)

Adapter Cable required to connect the SpO2 Soft Sensor (RSS-M) to the SenTec Digital Monitor (SDM). 'SpO2 Adapter Cables' incorporate a converter within a dedicated housing. Requires SDM firmware version SMB V07.00 / MPB V05.00 or newer.

V-STATS™ Installation CD

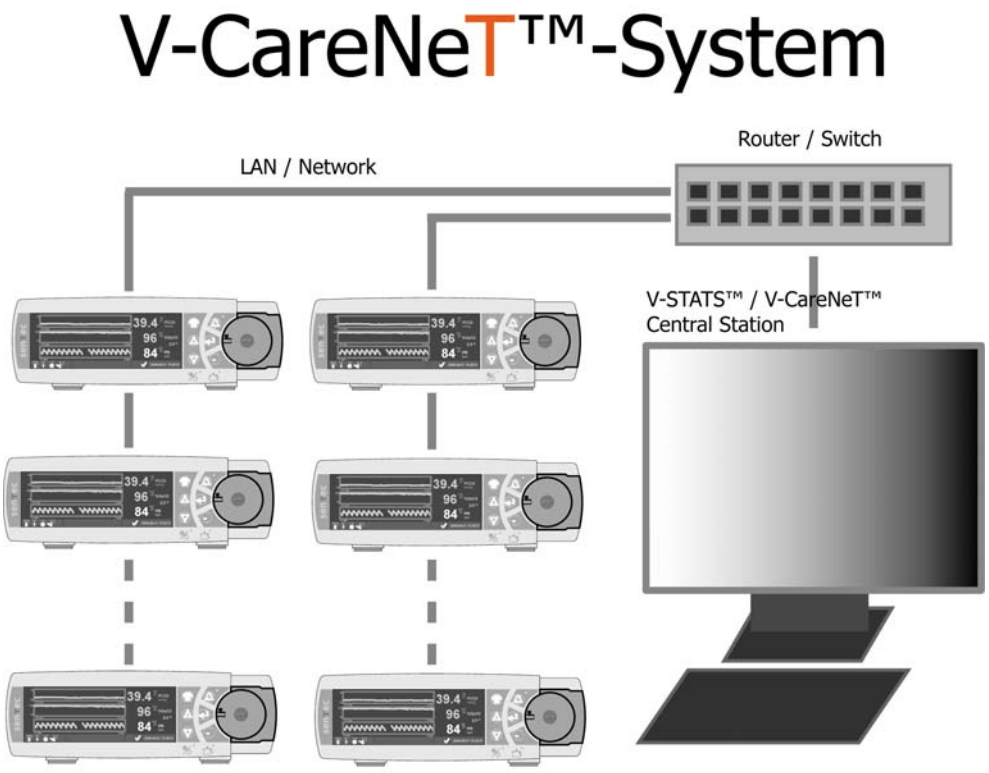
current version

Product: **V-STATS™ Installation CD, current version**
Product code: **V-STATS™ _CD**

PC based Remote Monitoring & Trend Data Download/Analysis/Viewing Software for SenTec Digital Monitors.

PC based software required a) to configure special (safety-relevant) settings of the SenTec Digital Monitor (SDM), b) to manage 'SDM Parameters Settings' and c) to download trend data from the internal memory of the SDM to a PC. It includes many useful features to analysis and view the downloaded trend data. Currently supported languages are English, German and French.
Starting from V-STATS™ 3.00 the software includes the V-CareNeT™ Package, which enables remote monitoring and alarm surveillance for multiple SDMs being connected to the same network as the PC with V-STATS™.

V-CareNeT™ Package Registration Code

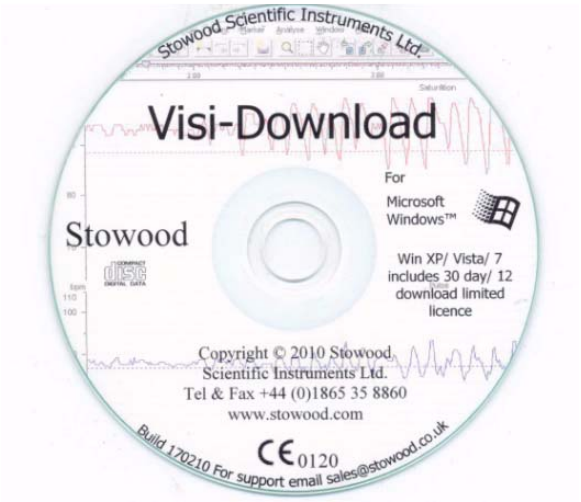


Product: **V-CareNeT™ Package Registration Code**
Product Code: **V-STATS_CPRC**

The V-CareNeT™ System enables remote monitoring and alarm surveillance for up to 20 SenTec Digital Monitors (SDM) being connected to the same network as the PC with V-CareNeT™, i.e. the PC with V-CareNeT™ is used as a central station for patient monitoring. For all admitted patients the central station displays all relevant SDM data and alarms. With V-CareNeT™ System it is furthermore possible to download trend data stored in the internal memory of the SDM via the network for subsequent display, analysis and reporting in V-STATS™. Up to 40 SDMs can be simultaneously connected to V-CareNeT™ via the network. Up to 20 patients can be simultaneously admitted for remote monitoring.

V-STATS™ 3.00 incorporates the V-CareNeT™ Package, however note, that the V-CareNeT™ only can be used after activation of the V-CareNeT™ Package. To activate the V-CareNeT™ Package the installed V-STATS™ license must be registered and you need to **purchase a 'V-CareNeT™ Package Registration Code' (CPRC)**. The CPRC you subsequently need to generate the 'V-CareNeT™ Package Activation Code' (CPAC) on the website http://registration.sentec.ch/vstats_CPAC.html. To activate the V-CareNeT™ Package you finally must enter the CPAC within V-STATS™ into the appropriate field of the dialog V-CareNeT™ Package Activation.

Visi-Download



Not for sales in the U.S.A.

Product Code	Product: Visi-Download
VDCSF	Visi-Download- multiple devices (CD and license security key)
VDS2nd	Visi-Downlaod second license Security key

Visi-Download from Stowood Scientific Instrument Ltd. is a PC based software package for downloading, viewing, analysis and reporting data from pulse oximeters, pCO2, ETCO2 and pO2 recorders from multiple manufacturers. Visi-Download also supports the SenTec Digital Monitor (SDM), i.e. it is possible to download trend data from the internal memory of the SDM to a PC. Subsequent data analysis includes detection and marking of events (e.g. desaturations, hypercapnia), artifacts and invalid measurement periods. The data analysis criteria are user adjustable. The results of the data analysis can be printed along with the graphs as configurable reports. Visi-Download currently supports six languages (English, Francais, Castellano, Deutsch, Italiano, Nederlands) and devices from multiple-manufacturers (BCI, GE/Datex-Ohmeda, Draeger, Konica Minolta, Masimo, Nonin, Novametrix, Radiometer, SenTec, and Stowood)

Upgrading a previously installed version
Previously installed versions of Download 2001 can be upgraded to include the SenTec Digital Monitor (SDM). Updating the Download 2001 software is simply by removing the installed software and installing Visi-Download. The data already downloaded remains in the old data directory.

Data Management Accessories

PC and Printer Interface Cables / Adapters / Accessories

A number of accessories are available for data communication between the SDM and the PC or the SDM and a Seiko DPU-414 Thermal Printer.

	Product Code	Product
	USB232C-180	**USB232 Converter Cable** For data communication between the SDM and a PC with USB-port (e.g. to download data from the SDM or to configure special (safety-relevant) settings of the SDM) Specification: length = 180 cm, DB9 Male System Requirements: Pentium Class CPU with USB port PC/ WIN 98, 2000, XP environment / 1 available USB type A (downstream) port.
	RS232C_MF	**Serial RS232 Cable, DB9 Male / Female** For data communication between the SDM and a PC with RS232 port (DB9) (e.g. to download data from the SDM or to configure special (safety-relevant) settings of the SDM) Specification: length = 180 cm or 200 cm, DB9 Male / Female
	SDMPrinter_C180	**Printer Cable (SDM to Seiko DPU-414 Thermal Printer)** To interface the SDM with the Seiko DPU-414 Thermal Printer if printing of trend data is required. Specification: length = 180 cm

PSG Adaptor Cables Demo Set

Product: **PSG Adaptor Cables Demo Set**
Product code: **PSG-Demo**

The ‘PSG Adaptor Cables Demo Set’ is designed to efficiently demonstrate interfacing of the SenTec Digital Monitor with various polygraphs (PG) or polysomnographs (PSG). The ‘PSG Adaptor Cables Demo Set’ can be used to adapt the SDM to the following PG or PSG systems:

- EMBLA S4500 ,EMBLA S7000, EMBLA N7000, Titanium (Embla),
- Alice3, Alice4, Alice5 (Philips Respironics),
- SOMNOlab (Weinmann),
- Comet (Gras),
- E-Series, Siesta (Compumedics),
- Porti 4, Porti 5 (Dr. Fenyves und Gut),
- EasyScreen (Heinen und Löwenstein)

PSG Adaptor Cable universal

Product: **PSG Adaptor Cable universal**
Product code: **PSG-X**

Adaptor Cable SDM to Polygraph or to Polysomnograph, length 180 cm, open wires

This universal PSG Adaptor Cable can be used to interface the SDM with most Polygraphs (PG) or Polysomnographs (PSG). Technicians simply attach the open wires to the required plugs for their particular PG or PSG. Ready-made cables are available upon request to connect the SDM to the most common PG or PSG systems (Embla, Alice, Sleeplab Pro, …)

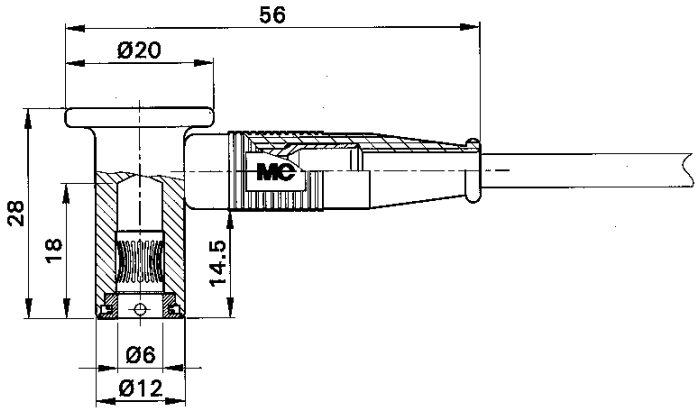
Nurse Call Cable universal

Product: **Nurse Call Cable universal**
Product code: **NC-X**

Adaptor Cable SDM to nurse call system, length 180 cm, open wires

This universal Nurse Call Adaptor Cable can be used to interface the SDM with most nurse call systems. Hospital technicians simply attach the open wires to the required plugs for their particular nurse call system.

Potential Equilization Cable



Product: **Potential Equilization Cable**
Product code: **POT-300**

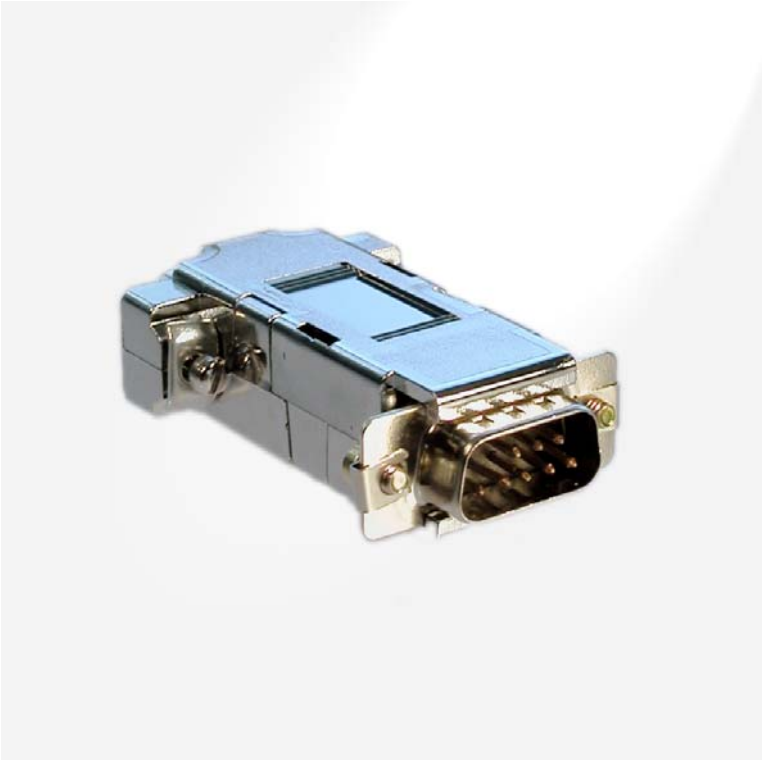
Potentially compensated hospital equipment cable for Category 3 and 4 medical examination rooms – TÜV tested.

Highly flexible connecting leads with green-yellow insulation for potential equalization. On both ends with assembled right-angled, spring-loaded socket. Sockets made of nickel-lated brass with Multilam™ made of gold-plated, hard drawn copper alloy.

Specifications:

- Length: 300 cm
- Lead cross section: 4.0mm^2
- Sleeve Insulation: TPE
- Lead cross section: 4.0mm^2

VueLink Adaptor



Product: **VueLink Adaptor**
Product code: **VL-A**

Adaptor SDM to Philips VueLink interface module

Interfacing the SDMS with Philips Patient Monitors allows Medical staff to display SDMS measurement data together with data collected by other devices on the main screen of the Philips Monitoring System. Interfacing with Philips Patient Monitors requires an SDM with firmware version SMB V05.11 or newer.

The hospital technician will connect the SDM via the VueLink Adaptor to a VueLink connection cable with D-SUB 9 connector and a VueLink Interface Module Auxiliary Plus (Type B) with Digital Open Interface Driver. Both are available at Philips dealers only.

Roll Stand
for the SenTec Digital Monitor

Product: **Roll Stand for the SenTec Digital Monitor**
Product code: **RS_SDM**

Roll Stand for the SenTec Digital Monitor (with basket and cable cleat)

The Roll Stand for the SenTec Digital Monitor provides a mobile mounting option for your monitor. The stand is durable and lightweight with locking castors and a pivoting head allowing adjustment for enhanced viewing. The attached basket accommodates additional supplies as well as storage for the sensor cable when not in use.

The Roll Stand is designed such that it can be used together with the Cable Cleat (see product code CC_SDM).

Cable Cleat & Bin for Disposables

Cable Cleat (CC_SDM)

Bin for Disposables (CC_BFD)

SDM with Cable Cleat

SDM with
Cable Cleat and Bin for Disposables

Product Code	Product
CC_SDM	Cable Cleat for SenTec Digital Monitor
CC_BFD	Bin for Disposables (to be mounted on Cable Cleat for SDM)

Use the **Cable Cleat of the SenTec Digital Monitor** (CC_SDM) to stow the sensor cable when not in use, thereby protecting it from damage or breakage. The base plate of the cable cleat has to be mounted on the bottom of the SenTec Digital Monitor. The Cable Cleat of the SenTec Digital Monitor is designed such that it can be used together with the Roll Stand for the SDM (see product code RS_SDM) as well as with the different mounting plates (see product codes MP-WR, MP-RSH, and MP-IW).

To stow frequently used disposables such as the Ear-Clips, Multi-Site Attachment Rings, and Sensor Gel a **Bin for Disposable** (CC_BFD) can be optionally attached to the Cable Cleat for the SenTec Digital Monitor.

Mounting Plate for Infusion stands and Wall railings

Product: **Mounting Plate for Infusion stands and Wall railings**
Product code: **MP-IW**

Universal mounting plate for fixation of SDM to infusion stands and wall railings

The universal mounting plate fixes the SDM either to infusion stands or other rigid tubes or poles with diameters from 12 mm to 38 mm, or to wall railings with standard dimensions of 25 mm height and 10 mm thickness.

This mounting plate is designed such that it can be used together with the Cable Cleat (see product code CC_SDM).

Mounting Plate for Wall railings

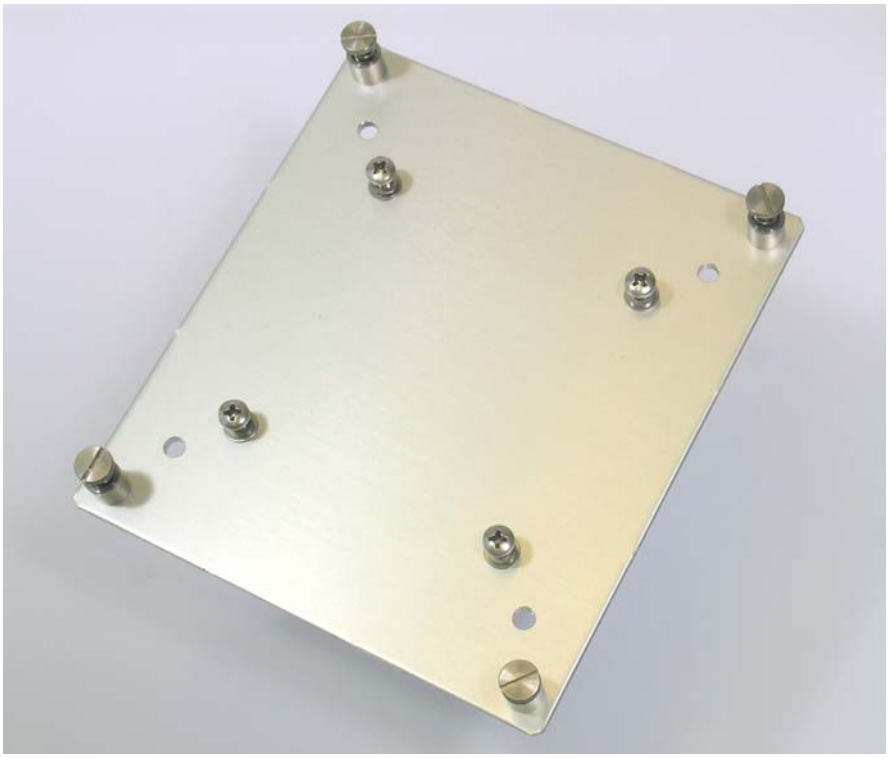
Product: **Mounting Plate for Wall railings**
Product code: **MP-WR**

Mounting plate for fixation of SDM to wall railings

This mounting plate fixes the SDM to wall railings with standard dimensions of 25 mm to 35 mm height and 8 mm to 10 mm thickness.

This mounting plate is designed such that it can be used together with the Cable Cleat (see product code CC_SDM).

Mounting Plate for Roll Stand Heads



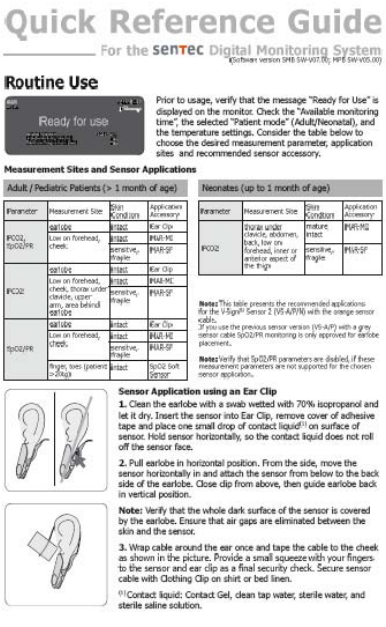
Product: **Mounting Plate for Roll Stand Heads**
Product code: **MP-RSH**

Mounting plate for fixation of SDM to heads of roll stands.

The mounting plate fixes the SDM to heads of roll stands, such as e.g. GCX POLYMOUNT.

This mounting plate is designed such that it can be used together with the Cable Cleat (see product code CC_SDM).

Quick Reference Guide for SDMS


Quick Reference Guide

For the sentec Digital Monitoring System

(Software version SMB SW-V07.00; MPB SW-V05.00)

Routine Use

Ready for use

Prior to usage, verify that the message "Ready for use" is displayed on the monitor. Check the "Available monitoring time", the selected "Patient mode" (Adult/Neonatal), and the temperature settings. Consider the table below to choose the desired measurement parameter, application sites and recommended sensor accessory.

Measurement Sites and Sensor Applications

Adult / Pediatric Patients (> 1 month of age)

Parameter	Measurement Site	Skin Condition	Application Accessory
tcPCO2, tcSO2/PR	earlobe	intact	Ear Clip
	Low on forehead, cheek.	intact	MAR-ME
		sensitive, fragile	MAR-SF
tcPCO2	earlobe	intact	Ear Clip
	Low on forehead, cheek, thorax under clavicle, upper arm, area behind earlobe	intact	MAR-ME
		sensitive, fragile	MAR-SF
tcSO2/PR	earlobe	intact	Ear Clip
	Low on forehead, cheek.	intact	MAR-ME
		sensitive, fragile	MAR-SF
	finger, toes (patient >20kg)	intact	tcSO2 Soft sensor

Neonates (up to 1 month of age)

Parameter	Measurement Site	Skin Condition	Application Accessory
tcPCO2	Distal to under clavicle, abdomen, back, low on forehead, inner or anterior aspect of the thigh	mature intact	MAR-MG
		sensitive, fragile	MAR-SF

Note: This table presents the recommended applications for the V-Sign® Sensor 2 (V5-AP/N) with the orange sensor cable.
If you use the previous sensor version (V5-AP) with a grey sensor cable SpO2/PR monitoring is only approved for earlobe placement.

Note: Verify that SpO2/PR parameters are disabled, if these measurement parameters are not supported for the chosen sensor application.

Sensor Application using an Ear Clip

1. Clean the earlobe with a swab wetted with 70% isopropanol and let it dry. Insert the sensor into Ear Clip, remove cover of adhesive tape and place one small drop of contact liquid[1] on surface of sensor. Hold sensor horizontally, so the contact liquid does not roll off the sensor face.

2. Pull earlobe in horizontal position. From the side, move the sensor horizontally in and attach the sensor from below to the back side of the earlobe. Close clip from above, then guide earlobe back in vertical position.

Note: Verify that the whole dark surface of the sensor is covered by the earlobe. Ensure that air gaps are eliminated between the skin and the sensor.

3. Wrap cable around the ear once and tape the cable to the cheek as shown in the picture. Provide a small squeeze with your fingers to the sensor and ear clip as a final security check. Secure sensor cable with Clothing Clip on shirt or bed linen.

[1] Contact liquid: Contact Gel, clean tap water, sterile water, and sterile saline solution.

Sensor Application using a Multi-Site Attachment Ring

1. Remove hair if necessary. Clean the skin at the measuring site with swab wetted with 70% isopropanol (for neonates may only use water) and let it dry.

2. Remove cover of adhesive tape of the attachment ring and attach the ring to the measuring site. Press gently on snap ring. Move your finger around the ring circumference to ensure a good adhesion of the entire adhesive to the skin.

3. Apply one small drop of contact liquid[1] or clean tap water to the skin area in the center of the attachment ring.

4. Holding the sensor at the cable strain relief, approach the MAR from the flap side and first insert the nose of the sensor into the ring. Then apply a slight downward pressure on the cable strain relief. Twist the sensor in the ring and press the sensor gently against the skin to spread the contact liquid[1]. Ensure that air gaps are eliminated between the skin and the sensor. Tape the cable to the skin and secure it with Clothing Clip on shirt or bed linen. For forehead/cheek placement, wrap the cable once around ear first.

Note: Alternatively you may click the sensor into the Multi-Site Attachment Ring first and then attach the assembly to the skin.

[1] Contact liquid: Contact Gel, clean tap water, sterile water, or sterile saline solution.

Patient - Monitoring

Verify that PCO2 is rising initially (PCO2 stabilization period) and that the readings for SpO2 and PR, if enabled, are stable. If needed, reposition the sensor.

After Monitoring

When monitoring is completed, or "Remaining Monitoring Time" has elapsed remove sensor from patient and check the skin. Clean the sensor with a swab wetted with 70% isopropanol and always store it in docking station.

IMPORTANT:
Always clean sensor after use!
Always keep the monitor switched on and the sensor in the Docking Station.

Maintenance Intervals

Membrane: Change the sensor membrane periodically as requested by the monitor. Place Membrane Changer on a solid flat surface. Hold the sensor head with the membrane face upwards and insert the V-Sign™ Sensor into the Membrane Changer. Keep the Membrane Changer horizontal while repeating the following procedure 4 times:

4x

1. Press down slowly, but firmly with the heel of hand, then

2. grab base of tool with one hand, turn top clockwise with other hand to next stop.

At the end, lift the sensor to remove it from the tool and verify that the membrane is securely seated.
Confirm the membrane change on the monitor and place the sensor in the docking station. A calibration will start.

For additional information / instructions refer to the Instruction Manual, the Technical Manual or the respective Directions for Use of the sensor and accessories.

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Product: **Quick Reference Guide for SDMS**
Product code: **QRG-xx (please replace xx with desired language code)**

Hardcopy of Quick Reference Guide for SDMS.

Contact us for availability of languages.

Instruction Manual for SDMS

Product: **Instruction Manual for SDMS**
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User Manuals CD

Product: **CD User Manuals**
Product code: **UMCD**

CD containing PDF-versions of current versions of product manuals and Directions for Use.

Contains:

- Quick Reference Guide and Instruction Manual for the SDMS (in all supported languages)
- Technical Manual for the SDM (in English only)
- Translation Matrix for Menu & Status Messages of the SDM for all supported languages
- VueLink Installation Manual (in English only)
- Flexport Interface Manual (in English only)
- Service Manual for the SDM (in English only)
- Directions for Use for the various Disposables (in English only)
- Instruction Manual for V-STATS™ (in all supported languages)
- V-STATS™ Installation Manual
- Installation Manuals for Mounting Plate and Cable Cleat (in English only)
- Certificate for Disinfection, Protocol for Safety Related Test, Repair Form (in English only)

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